
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 6-K

**REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934**

For the month of **December 2020**

Commission File Number: **001-36187**

EVOGENE LTD.

(Translation of Registrant's Name into English)

**13 Gad Feinstein Street
Park Rehovot P.O.B 2100
Rehovot 7612002 Israel**

(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F Form 40-F

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ____

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ____

CONTENTS

On December 15, 2020, Evogene Ltd., or Evogene, announced reaching a 'lead' stage in the novel mode-of-action herbicide program of its subsidiary, Ag Plenus Ltd., or AgPlenus. A copy of the press release is furnished as Exhibit 99.1 to this Report of Foreign Private Issuer on Form 6-K, or this Form 6-K, and is incorporated herein by reference.

The contents of Exhibit 99.1 to this Form 6-K, excluding the statements of AgPlenus' CEO and Evogene's President and CEO contained therein and the video referenced therein, are incorporated by reference in the registration statements on Form F-3 (Securities and Exchange Commission, or the SEC) File No. 333-240249, filed with the SEC on July 31, 2020), and Form S-8 (SEC File No.'s 333-193788, 333-201443 and 333-203856, filed with the SEC on February 6, 2014, January 12, 2015 and May 5, 2015, respectively) of Evogene, and will be a part thereof from the date on which this Form 6-K is submitted, to the extent not superseded by documents or reports subsequently filed or furnished.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

EVOGENE LTD.

(Registrant)

By: /s/ Dorit Kreiner

Dorit Kreiner
Chief Financial Officer

Date: December 15, 2020

EXHIBIT INDEX

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>
99.1	Press Release: AgPlenus Announces Reaching a 'Lead' Stage in its Novel Mode-of-Action Herbicide Program.



AgPlenus Announces Reaching a 'Lead' Stage in its Novel Mode-of-Action Herbicide Program

This significant development milestone was achieved following positive results for product candidate APH1¹ in field tests with commercial level application rates on a broad panel of weeds

Rehovot, Israel – December 15, 2020 – AgPlenus Ltd., an innovative company designing effective, sustainable crop protection products by leveraging computational biology and chemistry, and a subsidiary of Evogene Ltd. (NASDAQ: EVGN), (TASE: EVGN), announced today that it has reached the 'Lead' stage in its novel Mode-of-Action (MoA) herbicide program. The achievement of this milestone follows the conclusion of field tests that demonstrated that product candidate APH1, at commercial dose rates, effectively controlled a broad panel of weeds, including weeds that are known to have resistance to existing herbicides. These results were confirmed in independent field tests conducted by SynTech Research, an agricultural R&D contract research organization located in California.



Field test of APH1 against a panel of grass and broadleaf weeds – untreated control vs APH1

For a short video clip of the field test, view: <http://www.evogene.com/wp-content/uploads/2020/12/AgPlenus.mp4>

Herbicide crop protection plays an important role in global food security with the global herbicide market estimated to reach \$34 billion in 2022². Over the last several decades, the increasing use of existing MoA herbicides along with the extremely limited introduction of new MoA herbicides have resulted in weeds that are highly resistant to currently available commercial products. Herbicide resistance has become a critical issue for growers, reducing crop yields and requiring higher herbicide application rates. The key solution to the emergence of herbicide-resistance in weeds is the development and application of new MoA herbicides³.

¹ In previous publications, APH1 was referred to as HERB32.

² <https://www.prnewswire.com/news-releases/global-3410-billion-herbicide-market-2022---research-and-markets-300458389.html>.

³ Green, Jerry M. and Owen, Micheal D. K. "Herbicide-Resistant Crops: Utilities and Limitations for Herbicide-Resistant Weed Management", J AgriCell Food Chem. 2011; 59(11); pp. 5819-5829. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3105486/>.

AgPlenus' herbicide program focuses on the discovery and targeting of new MoAs to overcome herbicide resistance issues. Herbicide candidate APH1 is the first chemical compound addressing a novel MoA from this program to reach the 'Lead' stage.

APH1 is a broad-spectrum herbicide candidate that has been shown to be effective against highly-resistant grass and broadleaf weeds. The positive results announced today, achieved in field tests in Israel and confirmed in independent field tests in California by SynTech Research, were conducted with commercial-level application rates on a broad panel of weeds in post-emergence application. Weed control was statistically significant (compared to untreated controls) and in the range of 70%-100% in 6 out of 9 commercially important weed species. Additionally, in greenhouse tests conducted in post-emergence applications, APH1 demonstrated efficacy against several key resistant weeds, including glyphosate⁴ resistant weed strains. In addition to efficacy against a broad panel of weed species, APH1 also exhibited crop selectivity; corn and cereals showed inherent tolerance to APH1. A patent application has been filed for this candidate.

These field tests followed a series of lab and greenhouse experiments. Lab experiments validated that the biological pathway that APH1 impacts in plants is a new MoA, not present in higher organisms such as mammals, which may impact its potential safety profile. Greenhouse experiments, conducted in varying pre- and post-emergence applications, demonstrated strong efficacy against weeds that are notorious for developing resistance.

The next steps in the further development of APH1 are expected to include field trials and safety studies to reach the stage of an 'Optimized Lead'.

Douglas Eisner, CEO of AgPlenus, stated: "I am happy to have joined AgPlenus at such a pivotal point in the development of its herbicide candidates. After years of computational and in-planta work, AgPlenus has achieved an important milestone that we will leverage to advance our herbicide program. No doubt, this is a testimony to the value computational approaches can bring to agriculture. We look forward to reporting future progress with APH1 and other product candidates."

Ofer Haviv, Chairman of AgPlenus and CEO of Evogene, stated: "I am excited to see AgPlenus achieve such a significant milestone in the development of one of the most desired products in crop protection – a new MoA herbicide. This is most certainly an outcome of AgPlenus' unique computational approach to crop protection development, based on the use of Evogene's ChemPass AI engine. I look forward to seeing the continued development of this product candidate and others in the coming year."

⁴ Glyphosate is the active ingredient in one of the leading commercial products.

About a 'Lead' stage herbicide product candidate

The 'Lead' stage for a herbicide product candidate is achieved by demonstrating significant herbicidal efficacy, in field tests, at commercial application rates, on a broad panel of weeds.

About AgPlenus Ltd.

AgPlenus is designing effective and sustainable crop protection products by leveraging predictive biology and chemistry. The Company aims to develop crop protection products: herbicides, insecticides, fungicides and crop enhancers. AgPlenus has ongoing collaborations with industry leaders such as BASF and Corteva. AgPlenus is a subsidiary of Evogene Ltd. (NASDAQ: EVGN), (TASE: EVGN). For more information, please visit www.agplenus.com.

About Evogene Ltd.:

Evogene (NASDAQ: EVGN) (TASE: EVGN) is a leading computational biology company focused on revolutionizing product discovery and development in multiple life-science based industries, including human health and agriculture, through the use of our broadly applicable Computational Predictive Biology (CPB) platform. The CPB platform, incorporating a deep understanding of biology leveraged through the power of Big Data and Artificial Intelligence, has been designed to computationally discover and uniquely guide the development of life-science products based on microbes, small molecules and genetic elements. Utilizing the CPB platform, Evogene and its subsidiaries are now advancing product pipelines for human microbiome-based therapeutics through Biomica Ltd., medical cannabis through Canonic Ltd., ag-biologicals through Lavie Bio Ltd., ag-chemicals through AgPlenus Ltd., and ag-solutions for castor oil production through Casterra Ag Ltd. For more information, please visit www.evogene.com.

Forward Looking Statements

This press release contains "forward-looking statements" relating to future events. These statements may be identified by words such as "may", "could", "expects", "intends", "anticipates", "plans", "believes", "scheduled", "estimates" or words of similar meaning. For example, AgPlenus and Evogene are using forward-looking statements in this press release when they discuss the potential efficacy of APH1, the potential to receive a patent for APH1, the key solution to the emergence of herbicide resistance in weeds and the potential of APH1 to reach to the Optimized Lead stage. Such statements are based on current expectations, estimates, projections and assumptions, describe opinions about future events, involve certain risks and uncertainties which are difficult to predict and are not guarantees of future performance. Therefore, actual future results, performance or achievements of Evogene and its subsidiaries may differ materially from what is expressed or implied by such forward-looking statements due to a variety of factors, many of which are beyond the control of Evogene and its subsidiaries, including, without limitation, the global spread of COVID-19, or the Coronavirus, the various restrictions deriving therefrom and those risk factors contained in Evogene's reports filed with the applicable securities authorities. In addition, Evogene and its subsidiaries rely, and expect to continue to rely, on third parties to conduct certain activities, such as their field-trials and pre-clinical studies, and if these third parties do not successfully carry out their contractual duties, comply with regulatory requirements or meet expected deadlines (including as a result of the effect of the Coronavirus), Evogene and its subsidiaries may experience significant delays in the conduct of their activities. Evogene and its subsidiaries disclaim any obligation or commitment to update these forward-looking statements to reflect future events or developments or changes in expectations, estimates, projections and assumptions.

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